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FINDING THE STRATEGY OF SUSTAINABLE COMPETITIVE ADVANTAGE: CORE COMPETENCE ON MELON CULTIVATION WITH RESOURCE-BASED VIEW APPROACH

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ABSTRACT

Sustainable competitive advantage is an advantage that is achieved continuously by implementing strategies to attain unique values that competitors do not own. This research aims to identify resources and capabilities, analyze core competencies, and formulate strategies for sustainable competitive advantage in melon farming with the Resource-Based View (RBV) approach at Djoyo Tani. The research was conducted in November-December 2023 with a case study type. Respondents were selected by purposive sampling with 7 key informants. The analytical tools used were value chain analysis, VRIO framework analysis, and ANP. The results showed that melon farming has 40 resources and 25 capabilities. The core competencies of melon farming come from 11 resources and 4 capabilities. The most dominant competencies for achieving sustainable competitive advantage are Innovation (0.16163), Melon Cultivation Ability (0.14155), and Green House (0.13187). Meanwhile, alternative business strategies to achieve sustainable competitive advantage that can be implemented by melon farms are differentiation strategies. By implementing a differentiation strategy, Djoyo Tani can bring out its uniqueness or characteristics, so that it can be an attraction for consumers that is not owned by other melon farmers. The differentiation strategies that can be applied by Djoyo Tani in the future are (1) Developing its business horizontally; (2) Developing innovations in the melon cultivation process by applying the concept of smart farming based on the Internet of Things (IoT); and (3) Marketing through the utilization of Digital marketing technology.

Keywords: *ANP, differentiation strategies, melon farming, value chain analysis, VRIO*

BACKGROUND

Strategy is a potential action that requires top-level management decisions and large amounts of company resources and can affect the company's ability in the long term and future orientation (Maulidah et al., 2023). Strategy is a tool to achieve goals (Rangkuti, 2009). The goal of every company is to win the competition from its competitors in the long term. According to Porter (1994), a company can win the competition if the company has a competitive advantage compared to its competitors. Competitive advantage is achieved if the company can perform very well compared to its competitors (Maulidah et al., 2023). The concept of competitive advantage comes from the concept stated by Penrose (1959), namely the resource-based view (RBV) concept. RBV is one view that states that some internal resources are more important for companies than external factors in achieving sustainable competitive advantage (David, 2017). According to Barney (2007), competitive advantage can be achieved if the company has core competencies, namely excellence in managing its

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resources and capabilities compared to competitors. The concept of sustainability itself emphasizes 3 basic aspects, namely economic, social, and environmental (Laurett et al., 2021). The concept of sustainability can support production activities in designing strategic arrangements to keep operating in the future (Maulidah, et al. 2023). The main goal of the sustainability concept is to ensure that the next generation can utilize the current resources (Aziz et al., 2023; Liebetruth, 2017).

A company's resources and capabilities can be identified with value chain analysis tools (Porter, 1994). However, not all resources and capabilities can become core competencies (Hitt et al., 2011). Core competencies are only obtained from resources and capabilities that have 3 criteria, namely providing benefits to consumers, unique and difficult-to-imitate competitors, and having the potential to be developed into a wider market (Prahalad and Hamel, 2003). Barney J. and William S.H (2017) stated that the stages of a company's core competencies can be identified using the VRIO framework analysis tool. This analysis begins by identifying the company's resources, both tangible and intangible resources and capabilities. Furthermore, these resources and capabilities are measured by 4 indicators, namely Valuable, Rarity, Imitability, and Organization (Barney and Clark, 2007). Furthermore, from the core competencies owned, companies can find sustainable competitive strategies that will be carried out using the Analytic Network Process (ANP) analysis tool.

A sustainable competitive strategy is needed by each company to achieve the desired goals. One of the industrial sectors that need to implement this strategy is the agricultural sector. Agriculture is a sector that has an important role in the national economy, especially in the people's economy. This is because the agricultural sector must be able to meet the increasing food needs of the Indonesian population (Winarjo, 2013). The horticulture subsector is one of the most potential sub-sectors to be developed in Indonesia (Ulfia, 2015). The horticulture subsector includes fruits, vegetables, and flowers. Horticultural products that have the most market opportunities to be developed are fruits (Tjahyadi, 2001). Fruit commodities in Indonesia have a wide market share and demand continues to increase. According to Meiningtyas (2015), one of the fruit products that has commercial value and a wide market share ranging from traditional markets to modern markets in Indonesia is melon.

Melon (*Cucumis melo* L.) is one of the fruits that has high economic value and is often cultivated because it has a good taste, fresh, sweet taste, and has a lot of good nutritional content (Istiningdiyah et al., 2013). The largest producer of melon in Indonesia is East Java Province. In 2022, melon production in East Java will reach 62,287 tons (BPS East Java, 2023). One of the melon production centers in East Java is Bojonegoro Regency. The harvest area of melons in Bojonegoro in 2021 amounted to 147 ha while in 2022, the harvest area decreased by 40%, leaving only 88 ha (BPS East Java, 2023). This decline in harvest area is due to the weak resources and capabilities of melon farmers. In general, melon farmers in Bojonegoro still conduct melon farming on conventional land. Melon farmers' access to financial institutions for capitalization is low. As a result, melon farmers cannot invest in technology to facilitate the melon cultivation process. As a result, the quality of the melon harvest is not competitive and the price tends to be cheap. In comparison, for premium quality melons in the local Bojonegoro market, the price reaches Rp 20,000 to Rp 25,000 per kg while melons produced by conventional farmers only sell for Rp 8,000 to Rp 15,000 per kg. This condition triggers the tendency of farmers to shift the function of melon crops to chili plants, and secondary crops, and even divert them to non-agricultural sectors such as house construction.

In Bendo village, Kapas sub-district, Bojonegoro district, there is a Djoyo Tani melon farm founded by a young national pioneer in the field of innovation and technology. The young man

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cultivates melons in a greenhouse with a drip irrigation system. He built a greenhouse in the middle of a rice field. He opened a new way of thinking to conventional farmers in the village. He introduced horticultural farming using technology to reduce the risk of crop failure due to weather and pests. The melons he cultivates are sold through partnerships. The farm is still a start-up business but can compete with conventional melon farms in Bojonegoro with premium quality melons. Innovation and technological resources owned by Djoyo Tani in conducting melon farming can produce premium quality melons. These resources and capabilities need to be explored in depth to find the core competencies of melon farming.

Several studies have been conducted previously related to strategies to achieve sustainable competitive advantage with the RBV approach. Some of the research includes Aisyah et al. (2022) on the strategy of MSMEs in West Sumatra to achieve competitive advantage. This research is empirical in the form of a literature study of 5 articles. The results of this study are that RBV with VRIO analysis contributes positively to MSMEs in gaining competitive advantages. Furthermore, Nugroho et al. (2018) conducted research related to determining competitiveness based on core competency analysis in the tourism sector. Case study on mangrove ecotourism in East Java. The research method is descriptive with a case study type. The results showed that the core competencies of BeeJay Bakau Resort are the ability to manage integrated tourism, beach tourism area, tidal lodging, fresh raw materials, technology, proximity to suppliers, building skills in Hibachi cooking, and show skills.

Rahadian (2017) examines the application of the RBV concept to maintain the company's competitive advantage. The research method uses literature studies. The results of the study state that a company will have the ability to above the performance of its competitors if it can apply the RBV concept. This is because the company can manage its potential resources so that it has a long-term competitive advantage. Aknesia et al. (2015) related to business development strategies for specialty coffee at PT. Sinar Mayang Lestari found that the company has a temporary competitive advantage over technological resources and reputation. The study uses value chain analysis tools, the VRIO framework, and SWOT-AHP.

In contrast to previous studies, this research is more focused on the formulation of sustainable competitive advantage strategies derived from core competencies in the horticultural sector, especially melon farming. The purpose of this research is (1) to identify resources and capabilities in melon farming; (2) to analyze core competencies in melon farming; and (3) to formulate strategies for sustainable competitive advantage in melon farming. This research is expected to be taken into consideration for melon farming actors, Djoyo Tani, to take effective steps in determining sustainable competitive advantage strategies and implement these strategies in their business so that melon farming can continue to be more competitive than its competitors.

RESEARCH METHODS

The type of research conducted is quantitative research with a descriptive approach, namely a case study on Djoyo Tani melon farming. Determination of respondents were selected by purposive sampling. Respondents were purposively selected according to predetermined criteria. Respondents were parties involved in melon farming activities in the Djoyo Tani Green House. Respondents in this study are referred to as key informants, namely someone who has expertise and can provide the necessary information. There are 7 key informants in this study consisting of 1 owner and 6 workers.

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This research uses two types of data, namely primary and secondary data. Primary data was obtained from semi-structured interviews with 7 key informants, participant observation, and questionnaire filling by 1 key informant (owner). Meanwhile, secondary data were obtained from literature review and documentation. This research was conducted at Djoyo Tani melon farm; Village: Bendo, RT: 23 RW: 02, District: Kapas, Regency: Bojonegoro. The research was conducted in November-December 2023. The analytical tools in this research used Value Chain Analysis to identify the elements in melon farming that create added value, VRIO Framework (Valuable, Rarity, Imitability, Organization) to obtain core competencies of melon farming, and Analytic Network Process Analysis (ANP) to select alternative strategies for sustainable competitive advantage in melon farming.

Value Chain Analysis

Value Chain Analysis is used to identify what resources and capabilities are owned by melon farms. The value chain is divided into 2 activities, namely main activities and supporting activities. The main activity consists of 5 criteria while the supporting activity consists of 4 criteria. The following Table 1 explains the operational definition of each activity in the value chain.

Table 1. Operational Definition of the Melon Value Chain

No	Value Chain	Operational Definition
Main Activities		
1	Logistics In	Activities to receive production facilities for melon plants
2	Operation	Melon cultivation activities in the greenhouse
3	Logistics Out	Harvesting and delivery of melons to partners
4	Marketing and Sales	Promotional activities and melon sales to partners as well as melon-picking educational tours
5	Services	Melon planting and picking education service activities
Supporting Activities		
1	Procurement	Activities to prepare planting calendars, financial bookkeeping, information systems, and melon business legality
2	Technology Development	Technology application activities in melon cultivation
3	HR Management	Employee recruitment, training, and rewards activities
4	Company Infrastructure	Procurement of melon plant production facilities

Table 2. Operational Definition of Variables

Criteria	Subcriteria	Operational Definition of Variables
Tangible Resources	Financial resources	Melon farming has the capital to run its business unit
	Physical resources	Facilities and infrastructure owned by melon farming
	Technology resources	Has patented technology
	Organizational resources	Formal organizational structure
Intangible Resources	Human Resources	Knowledge, confidence, skills, and the ability to collaborate with others
	Innovation and creativity resources	Ideas, ability to innovate
	Reputation Resources	Brand name, perceived product quality, positive reputation with interested parties
Capability		A combination of tangible resources and intangible resources to create value for melon farming

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Value chain activities are used to identify resources and capabilities owned by melon farms. The RBV approach focuses on the effective use, bundling, and exploitation of internal resources to achieve sustainable competitive advantage. These resources are divided into two: tangible and intangible (Murcia et al, 2022). Each resource is further divided into several sub-criteria. Table 2 above explains the operational definition of resources and capabilities in melon farming.

VRIO Framework Analysis

The VRIO framework is used to analyze which resources and capabilities can become core competencies as a source of competitive advantage. The following is Table 3 which explains the VRIO framework.

Table 3 . VRIO Framework

Is the Resources or Capabilities				
Valuable?	**Rare?**	**Costly to imitate?**	**Exploited by Organization?**	**Competitive Implications**
No	-	-	No	Competitive Disadvantage
Yes	No	-	↕	Competitive Parity
Yes	Yes	No	↕	Temporary Competitive Advantage
Yes	Yes	Yes	Yes	Sustained Competitive Advantage

Source: Barney and Hesterly (2017)

From the results of identifying the resources and capabilities of melon farming, each resource and capability is then assessed using the VRIO framework. If the resource or capability meets the VRIO requirements, the resource can have a value of 4, which means the resource or capability is a source of sustainable competitive advantage. Vice versa, if the resource or capability does not meet the VRIO requirements then the resource or capability has no value or 0. The following is Table 4 which explains the variable measurement scale.

Table 4 . Variable Measurement Scale

V	R	I	O	Amount	Competitive Implications	Definition
0	0	0	0	0	Disadvantage	Resources and capabilities have no advantages
1	0	0	0	1	Competitive Equality	Resources and capabilities are no worse than competitors
1	1	0	0	2	Temporary competitive advantage	Resources and capabilities will be imitated by other companies shortly, so the company will lose its competitive advantage.
1	1	1	0	3	Temporary competitive advantage	Resources become expensive for the company because there are costs incurred that are not used.
1	1	1	1	4	Sustainable competitive advantage	The company has a sustainable competitive advantage

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Information:
1. 1 = if the resource or capability is assessed as meeting the VRIO criteria
2. 0 = if the resource or capability is assessed as not meeting the VRIO criteria

Source: Nugroho et al. (2018)

Analytic Network Process (ANP) Analysis

Analytical Network Process Analysis (ANP) to formulate a sustainable competitive advantage strategy sourced from the core competencies of melon farming. ANP is implemented by arranging a hierarchy into 4 levels, namely level 1: objectives, level 2: criteria, level 3: core competencies, and level 4: alternative strategies. Each element within each level and between levels is assessed for the level of interaction relationship using the assessment scale as in Table 5.

Table 5. ANP Analysis Rating Scale

Numerical Value	Definition	Information
1	Equally Important	Two variables **are equally important**
3	A Little More Matters	One variable is valued **slightly more important** compared to other variables.
5	More important	One variable is considered **more important** than other variables
7	Much More Important	One variable is considered **more important** than other variables
9	Absolutely More Important	One variable is considered **absolutely important** compared to other variables.
2, 4, 6, and 8	Middle value	A value that is between two adjacent considerations

RESULT AND DISCUSSION

Value Chain Analysis

Djoyo Tani is one example of a modern form of agriculture that has adopted technology in the melon cultivation process. The technology applied at Djoyo Tani is expected to reduce the risk of crop failure due to weather factors and land conditions. In addition, it is also able to produce crops with high productivity and a higher selling price than conventional melon products. The owner of Djoyo Tani hopes that the presence of Djoyo Tani can inspire young farmers, especially farmers in the village. Hopefully, in the future, farmers will be able to apply technology in their cultivation process so that they can produce optimal yields.

Djoyo Tani is engaged in melon farming based on greenhouse technology with a drip irrigation system. The company can produce premium quality melons with a fresh, sweet taste, juicy flesh, and almost uniform fruit size. Melons are harvested within 60-70 days after planting. The harvest time is faster than the harvest time of conventional melon farming. The area of Djoyo Tani's greenhouse currently reaches 1,000 meters^2. Djoyo Tani's Green House itself is divided into 2 parts with an area of 500 meters^2 each. The greenhouse can accommodate 4,000 melon plants.

Value chain analysis in the research is used to identify the resources and capabilities of Djoyo Tani's melon farming business as a source of sustainable competitive advantage for the company. Activities in the value chain are divided into two, namely main activities and supporting activities.

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The main activities and the supporting activities in the Djoyo Tani can provide added value to customers. These activities are internal strengths in the form of resources and capabilities owned by Djoyo Tani as a source of core competencies for melon cultivation. The following Table 6 shows the main activities in the melon farming value chain.

Table 6. Main Activities in the Djoyo Tani Value Chain

Number	Value Chain	Activity	Information
1	Inbound Logistics	Plant production facilities warehouse capacity	SDB 1
		Ability to store sprays	KPB 1
2	Operational	Premium melons	SDB 2
		Melon production capacity	SDB 3
		Partner assistance	SDTB 1
		Melon farming capabilities	KPB 2
		Ability to use technology in farming processes	KPB 3
3	Outbound Logistics	Melon Packaging	SDB 4
		Labeling	SDB 5
		Ability in melon packaging	KPB 4
4	Marketing and Sales	Melon sales	SDB 6
		Plant production facilities sales	SDB 7
		Transport rental (ATV)	SDB 8
		Brand	SDTB 2
		Consumer perceptions of melon quality	SDTB 3
		Melon picking an educational tour.	SDTB 4
		Ability to utilize social media for product promotion	KPB 5
		Ability to communicate	KPB 6
		Ability in transportation rental	KPB 7
		Ability to develop business vertically	KPB 8
5	Service	Melon picking and peeling service	KPB 9
		Ability to assist consumers	KPB 10

Information:
1. SDB is a resource owned by the company
2. KPB is the capability owned by the company

Source: Processed Data (2023)

In the main activities, there are 5 chains, namely inbound logistics, operations, outbound logistics, marketing and sales, and service. In Table 6 below it can be seen that in the main activities, there are 22 resource and capability activities. The main activities are consisting of 8 tangible resources, 4 intangible resources, and 10 capabilities. Below is Table 7 which explains the supporting activities. In the supporting activities, there are 43 activities consisting of 18 tangible resources, 10 intangible resources, and 15 capabilities. The supporting activities consist of 4 chains, namely company infrastructure, human resources, technology development, and procurement. The following Table 7 shows the supporting activities in the melon farming value chain.

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Table 7. Supporting Activities in the Djoyo Tani Value Chain

Number	Value Chain	Activity	Information
1	Company Infrastructure	Personal capital	SDB 9
		Government grant funds	SDB 10
		Greenhouses	SDB 11
		Hatchery	SDB 12
		Gazebo	SDB 13
		Land	SDB 14
		Geographic location	SDB 15
		Harvesting equipment and scales	SDB 16
		Planting-harvest calendar	SDB 17
		Information Systems	SDB 18
		Legal Status	SDTB 5
		Ability to obtain funding	KPB 11
		Ability to carry out financial management	KPB 12
		Ability to establish business partners	KPB 13
		Production planning capabilities	KPB 14
		Ability to use harvest equipment	KPB 15
2	Human Resources	Work results reporting system	SDB 19
		Rewards System	SDB 20
		Training	SDTB 6
		Skills and Abilities	SDTB 7
		Experience	SDTB 8
		Family Work Culture	SDTB 9
		Employee Loyalty	SDTB 10
		Ideas and creativity	SDTB 11
		Ability to lead employees	KPB 16
		Ability to work in a team	KPB 17
		Ability to generate ideas, innovation, and creativity	KPB 18
		Ability to retain employees	KPB 19
		Ability to create work comfort	KPB 20
		Ability to improve employee quality	KPB 21
3	Technology Development	Drip irrigation technology	SDB 21
		Nutrient dissolving capacity	SDB 22
		Application of organic fertilizer	SDB 23
		Knowledge	SDTB 12
		Innovation	SDTB 13
		Ability to operate drip irrigation systems	KPB 22
		Ability to measure nutritional needs	KPB 23
		Ability to use organic fertilizer for plants	KPB 24
4	Procurement	Water sources	SDB 24
		Access to raw materials	SDB 25
		Partnership system	SDB 26
		Reputation with partners	SDTB 14
		Ability to obtain and manage raw materials	KPB 25

Information:

1. SDB is a resource owned by the company
2. KPB is the capability owned by the company

Source: Processed Data (2023)

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Based on Table 6 and Table 7 above to identify the resources owned by Djoyo Tani, the first thing the researcher did was to look at tangible assets consisting of financial resources, organizational resources, physical resources, and technological resources. Furthermore, the second thing done by researchers is to look at intangible resources consisting of human resources, innovation resources, and also reputational resources. The last is identifying capability. Capability is a combination of tangible and intangible resources that can produce a capability for Djoyo Tani melon farming. Based on the resources that have been identified, there are several capabilities found in Djoyo Tani melon farming. So that based on this, 65 resources and capabilities owned by Djoyo Tani are obtained.

VRIO Framework Analysis

Sustainable competitive advantage (SCA) to analyze the sustainable potential of a company. For analysis and comparison, SCA uses a parameter called value, Rarity, Imitability, and Organization (VRIO) (Tresna, 2018). Based on the results of identifying existing resources and capabilities in Djoyo Tani's melon farming business, a brief VRIO analysis can be shown in Tables 8 and 9.

Table 8. VRIO Analysis Results on Djoyo Tani Resources

No	Competitive Implications	Resource
1	Competitive Parity	Plant production facilities warehouse capacity
		Plant production facilities sales
		Gazebo
		Land
		Harvesting equipment and scales
		Planting – harvest calendar
		Work results reporting system
		Application of organic fertilizer
		Water sources
		Legal status
		Information Systems
		Training
2	Temporary competitive advantage	Melon Packaging
		Labeling
		Personal capital
		Transport rental (ATV)
		Hatchery
		Geographic location
		Reward system
		Nutrient dissolving capacity
		Access to raw materials
		Partner assistance
		Brand
		Skills and abilities
		Experience
		Ideas and creativity
		Knowledge
		Partnership system
		Reputation with partners

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No	Competitive Implications	Resource
3	Sustainable competitive advantage	Premium melons
		Melon production capacity
		Melon sales
		Government grant funds
		Greenhouses
		Drip irrigation technology
		Consumer perceptions of melon quality
		Melon picking educational tour
		Family work culture
		Employee loyalty
		Innovation

Information:
1. SDB is a resource owned by the company
2. KPB is the capability owned by the company

Source: Processed Data (2023)

Table 8 above is the result of the VRIO analysis of melon farming resources. In this Table, it is known that there are 11 sources of sustainable competitive advantage, 17 sources of temporary competitive advantage, and 12 sources of competitive advantage that are the same as their competitors. The following is Table 9 which explains the results of VRIO analysis on melon farming capabilities. In the Table below, it is explained that there are 4 sources of sustainable competitive advantage, 16 sources of temporary advantage, and 5 sources of advantage that are equal to their competitors.

Table 9. VRIO Analysis Results on Djoyo Tani's Capabilities

No	Competitive Implications	Capability
1	Competitive Parity	Ability to store sprays
		Ability to carry out financial management
		Ability to use harvest equipment
		Ability to improve employee quality
		Ability to use organic fertilizer for plants
2	Temporary competitive advantage	Ability in melon packaging
		Ability to utilize social media for product promotion
		Ability to communicate
		Ability in transportation rental
		Ability to develop business vertically
		Melon picking and peeling service
		Ability to assist consumers
		Ability to obtain funding
		Ability to establish business partners
		Production planning capabilities
		Ability to lead employees
		Ability to generate ideas, innovation, and creativity
		Ability to retain employees
		Ability to operate drip irrigation systems
		Ability to measure nutritional needs
		Ability to obtain and manage raw materials

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No	Competitive Implications	Capability
3	Sustainable competitive advantage	Melon farming capabilities Ability to use technology in farming processes Ability to work in a team Ability to create work comfort

Source: Processed Data (2023)

Based on the results of the VRIO analysis on Table 8 and Table 9 above, out of 65 resources and capabilities, there are only 11 types of resources and 4 types of capabilities that can provide sustainable competitive advantage. Meanwhile, other resources are only parity and provide a temporary competitive advantage. This means that many melon farming resources and capabilities must be evaluated and developed to provide a sustainable competitive advantage for Djoyo Tani melon farming. For example, an important but underdeveloped competency is the partnership system. If this competency is developed optimally, melon farming will be able to compete and be superior to its competitors.

Core Competencies

Core competencies are derived from capabilities that are trategically valuable to the firm (Hafeez, et al., 2002). Core competencies are the source of sustainable competitive advantage. In the melon farming observed in the study, there were 15 core competencies out of 65 resources and capabilities. The core competencies of melon farming consist of 6 tangible resources, 5 intangible resources, and 4 capabilities. These core competencies are described in Table 10 below:

Table 10. Core Competencies of Djoyo Tani's Melon Farming Business

No	Resource	Capability
1	Premium melons	1. Melon farming capabilities
2	Melon production capacity	2. Ability to use technology in farming processes
3	Melon sales	3. Ability to work in a team
4	Government grant funds	4. Ability to create work comfort
5	Greenhouses	
6	Drip irrigation technology	
7	Consumer perceptions of melon quality	
8	Melon picking an educational tour.	
9	Family work culture	
10	Employee loyalty	
11	Innovation	

Source: Processed Data (2023)

Based on Table 10 above, it can be seen that the core competencies owned by Djoyo Tani consist of 6 tangible resources as follows:

1. They are Premium melons. Djoyo Tani is engaged in melon farming by applying innovation and technology to produce premium melons. Premium melon in this study means melon with superior quality, namely sweet net and Inthanon varieties that have a distinctive taste, sweet, juicy fruit, and uniform size.

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2. Melon production capacity. The production capacity of melons in Djoyo Tani is 4,000 plants where each plant produces 1 fruit. This melon farm has 2 greenhouses, which means that the production capacity is divided into 2,000 plants per greenhouse. So, every harvest, Djoyo Tani produces around 4-5 tons of melons.
3. Melon sales. The sale of melons is a financial activity that falls into the category of financial resources in the aspect of tangible resources. Melon sales are also a form of marketing activity carried out by Djoyo Tani.
4. Government grant funds. Government grants are a form of financial support provided by the Government to melon farms to improve the performance of melon farms. Djoyo Tani in this case has received grant assistance from the East Java provincial government to expand melon production capacity by building one more greenhouse. The existence of capital assistance from outside parties is a form of source of competitive advantage for melon farming.
5. Greenhouses. The greenhouse is a physical resource that was built with considerable funds so it is only owned by a few melon farmers. In addition, it requires special skills for maintenance.
6. Drip irrigation technology. By applying drip irrigation, Djoyo Tani can time when water and nutrients will be given to the melon plants. So, the use of production inputs, in this case, water and nutrients can be more effective and efficient. The use of drip irrigation can also reduce the use of watering labor.

The core competencies owned by Djoyo Tani also consist of 5 internal sources of intangible resources. The five intangible resources are:

1. Consumer perceptions of melon quality. The goal of every company is to build a positive company reputation through positive consumer perceptions of the products or services produced so that consumers are loyal and bring profits. The owner is so sure that the quality of the melons he produces is super quality melons.
2. Melon picking educational tours. The concept of the melon education tour itself is carried out by the owner of Djoyo Tani as a form of premium melon marketing strategy.
3. Family work culture. Djoyo Tani's organization is designed in such a way as to create a close relationship between the owner and employees and between functions formed in the organization so that together they unite to produce the best value for consumers. This provides an opportunity for melon farming to compete and win.
4. Employee loyalty. The good family-like relationship between employees and owners is a source of competitive advantage for melon farming. Employees can work together in teams to serve consumers.
5. Innovation. Innovation is very important to be carried out by melon farms due to increased competition and consumer demands for quality melon products at affordable prices.

While core competencies derived from capabilities are 4. The four capabilities are: (1) Melon farming capabilities, (2) Ability to use technology in farming processes. Farmers' capability in using technology becomes important after technology as a tangible resource itself is owned by Djoyo Tani. Increasingly advanced technology has changed the way of farming from conventional to modern. Technology in farming is used to increase efficiency. The application of technology can also increase melon productivity. This is because farmers no longer need to water the melon plants manually in the morning or evening. (3) Ability to work in a team and (4) Ability to create work comfort. This core competency is a manifestation of the implementation of good human resource management by the owner of Djoyo Tani. The relationship between employees and the owner, which is like a family, is

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a source of competitive advantage for melon farming. Employees can work together in teams to serve consumers.

ANP Analysis

For melon farming to optimize its sources of sustainable competitive advantage, it is necessary to analyze which of the 11 core competencies is the main source of sustainable competitive advantage. The following Figure 1 is a model of ANP preparation in melon farming.

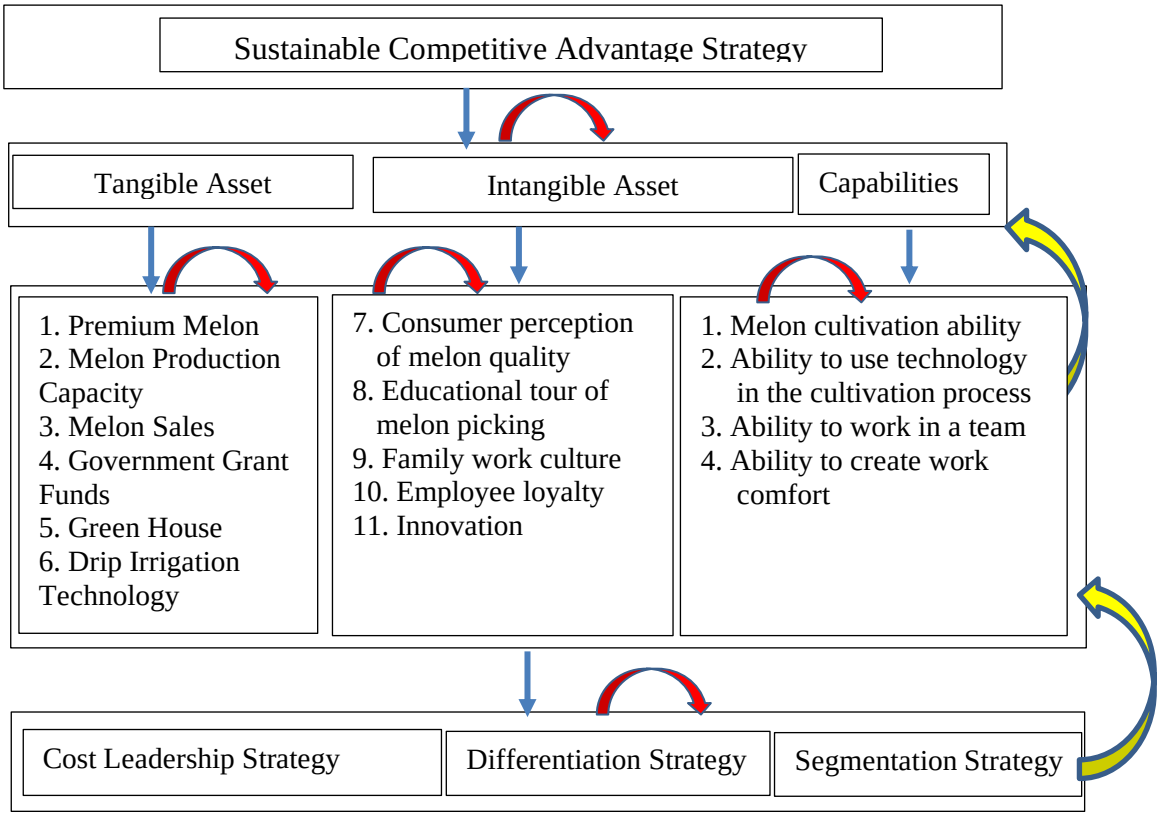

Figure 1. ANP Model for Melon Farming

Information:

Has a dependency relationship

Every element in the tier affects each other

Has a reciprocal relationship

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Table 11. ANP Analysis Results for Melon Farming

Clusters	Nodes	Normalized By Cluster	Limiting	Order of Priority
A. Goals	Sustainable Competitive Advantage Strategy	0	0	
B. Criteria / Internal Factors	1. Tangible Resources	0.21408	0.061167	3
	2. Intangible Resources	0.40634	0.116097	1
	3. Capability	0.37958	0.108451	2
C. Subcriteria / Core Competencies	1. Premium Melon	0.07483	0.032071	6
	2. Melon Production Capacity	0.02376	0.010184	12
	3. Melon Sales	0.02037	0.008732	13
	4. Government Grant Funds	0.01645	0.007051	15
	5. Green House	0.13187	0.056517	3
	6. Drip Irrigation Technology	0.08258	0.03539	5
	7. Consumer Perceptions of Melon Quality	0.01855	0.007949	14
	8. Melon picking educational tour		0.026097	7
	9. Family Work Culture	0.03425	0.014679	10
	10. Employee Loyalty	0.04734	0.020288	9
	11. Innovation	0.16163	0.069269	1
	12. Melon Cultivation Ability	0.14155	0.060663	2
	13. Ability to Use Technology in the Cultivation Process	0.10429	0.044695	4
	14. Ability to Collaborate in a Team	0.03083	0.013213	11
	15. Ability to Create Work Comfort	0.0508	0.021773	8
D. Alternative Strategy	1. Cost Leadership Strategy	0.10597	0.030276	3
	2. Differentiation Strategy	0.51503	0.14715	1
	3. Segmentation Strategy	0.37901	0.108288	2

Source: Processed Data (2023)

Based on Table 11 above, it is known that the most important criteria for achieving sustainable competitive advantage are Intangible Resources (0.40), Capabilities (0.37), and Tangible Resources (0.21). Intangible Resources can be seen in the aspects of human resources, innovation and creativity resources, and reputation resources. This means that melon farming will maintain its competitive advantage in the long term if it can continue to optimize the performance of labor, innovation in the cultivation process and product innovation, and the reputation of the business unit in the minds of consumers.

Innovation is part of intangible resources that have the highest priority value of other core competencies, which is 0.16163. The level of product innovation referred to here is such as the creation, selection, development, process, and technology used that can be adopted by companies to be more competitive. Innovation is very important to be carried out by melon farms due to increased competition and consumer demands for quality melon products at affordable prices. Competitive environmental pressures on the fruit market itself can be an impetus for farmers to innovate. The superiority of melon farming in the process of increasing the quality and quantity of melon yields can

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be seen from the innovativeness of the farm. In this case, innovation is used to develop products that are different from competitors. Therefore, melon farms with greater innovation capacity will be more successful in responding to the external environment to achieve a competitive advantage.

Superior capabilities are the skills required by a company to make optimum use of its resources. Without capabilities, the company's resources are of very little value. Resources that are optimally utilized by using personnel capabilities will produce competencies that can build the company's competitive advantage. In this study, the ability to cultivate melons, which represents the capability aspect, is the most prominent capability compared to the other 3 capabilities. Melon cultivation capability has the second priority order out of 15 core competencies with a priority value of 0.14155. Melon cultivation capability is one important capability that must be improved by melon farmers so that they can produce high-quality melons and have high competitive value compared to melon products from competitors.

The third priority order of core competencies owned by Djoyo Tani is the greenhouse. The greenhouse is one of the physical resources that represent the tangible resources category. The greenhouse has a priority value of 0.13187. This physical resource is owned by melon farms to condition the environment of melon plants to minimize the risk of crop failure caused by weather factors and pest attacks. As one of the hard-to-imitate and high-value melon farming resources, greenhouses are scarce because these physical resources require large capital to build. Not all melon farmers have access to large capital to build a greenhouse. Thus, the greenhouse in Djoyo Tani makes this melon farm superior to its competitors.

The most optimal competitive strategy used by Djoyo Tani is the Differentiation strategy (0.52) compared to the segmentation strategy (0.38) and cost leadership strategy (0.10). Differentiation strategy is to create a product or service that is different from competitors and maximize the overall performance of its resources and capabilities to make the product or service valuable and unique to customers. By implementing a differentiation strategy, Djoyo Tani can bring out its uniqueness or characteristics, so that it can be an attraction for consumers that is not owned by other melon farmers.

Sustainable Competitive Advantage Strategy

Sustainable competitive strategy to give companies the profits they can achieve and sustain higher performance (Salgado et al., 2022). The Resource-based View approach sees that internal resources are the most important part for a company in facing competition. Core competencies come from the resources (tangible and intangible) and capabilities owned by the company. However, only resources and competencies that have certain characteristics can become core competencies for a company.

The most dominant competencies for achieving sustainable competitive advantage are Innovation, Melon Cultivation Ability, and Green House. Djoyo Tani needs to develop innovations in terms of determining melon varieties to be planted, applying IoT-based smart farming technology to the cultivation process, and using digital marketing in marketing melon products. Innovation is the main competency in melon farming This is in accordance with the results of Kim Kort's research (2005) which states that sustainable innovation will help companies achieve a competitive advantage.

Djoyo Tani can also improve its capabilities in melon cultivation by using different planting media such as cocopeat, providing more scheduled nutrition, and utilizing bees in terms of melon pollination. Furthermore, to develop the performance of the greenhouse, Djoyo Tani needs to carry

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out routine maintenance, add large fan facilities in the greenhouse to keep the air cool inside, and rebuild the greenhouse on vacant land so that the greenhouse area owned increases. Meanwhile, the most optimal competitive strategy used by Djoyo Tani's management is the Differentiation Strategy. By bringing out uniqueness or characteristics in the performance of melon farming, in the future it will become an attraction for consumers that other melon farmers do not have. Some of the differentiation strategies being implemented by Djoyo Tani at this time include:

1. Product differentiation. The varieties chosen by Djoyo Tani are superior varieties, namely Inthanon and Sweet Net. These two varieties are rarely found in the market. The advantages of the Inthanon variety are that the melon has a sweet, fresh taste, juicy flesh, and dark green skin. As for the sweet net variety, the flesh is more crunchy, and the flavor is sweet. This premium product can attract consumers compared to ordinary melons in the market in general.
2. Place differentiation. Djoyo Tani conducts the melon farming process in a greenhouse while local farmers around are on open land. The cultivation conditions in the greenhouse have the advantage of being able to control the environmental conditions of melon plants. So that plant survival is higher and productivity is also higher than melon plants on open land.
3. Differentiation of the cultivation process. In cultivation, this melon farm uses planting media, namely cocopeat. Cocopeat can absorb nutrients and water more efficiently and effectively. So that no input is wasted. Melon plants are also fertilized with organic fertilizers so that they taste sweeter and healthier. All fertilization and watering processes are carried out using a drip irrigation system. The application of technology in the cultivation process makes Djoyo Tani more efficient in the use of labor.
4. Market differentiation. The marketing method carried out by Djoyo Tani is by partnering and open house or the concept of melon picking educational tourism. The main market for this melon farming is company X. While the second market is the wider community who are visitors to the melon picking educational tour. Djoyo Tani's market certainty makes it superior to competitors.

The differentiation strategies that can be applied by Djoyo Tani in the future are:

1. Develop its business horizontally. Djoyo Tani can open a business in the field of melon cultivation consultants in greenhouses, making greenhouses, and suppliers of melon farming tools and equipment.
2. Develop innovations in the melon cultivation process by applying the concept of smart farming based on the Internet of Things (IoT). With this concept, efficiency in the use of production inputs can be increased again.
3. Marketing through the utilization of Digital marketing technology. Nowadays, almost everyone has a smartphone. With digital marketing, consumers or visitors to melon educational tours will increase even more.

CONCLUSION AND SUGGESTION

Melon cultivation has as many as 40 resources consisting of 26 tangible assets and 14 intangible assets and has 25 types of capabilities. Of all these resources and capabilities, not all of them are sources of core competency for melon farming. The core competencies possessed by Djoyo Tani's melon farming business only come from 11 resources consisting of 6 tangible resources and 5 intangible resources, as well as 4 capabilities. The most dominant competencies for achieving sustainable competitive advantage are Innovation, Melon Cultivation Ability, and Green House. A

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competitive strategy that can be applied to achieve sustainable competitive advantage is a differentiation strategy.

The differentiation strategies that can be applied by Djoyo Tani in the future are (1) developing its business horizontally, (2) developing innovation in the melon culture program by implementing smart farming counseling with the Internet of Things (IoT), and (3) conducting marketing through the utilization of digital marketing technology. This is by the results of research by Windarti et al. 2022 which states that dragon fruit farmers in Jawa District prioritize the strategy of innovating with attractive and contemporary sales displays. Farmers need to carry out innovation strategies by adding digital platforms used such as Instagram, YouTube, and others other than Facebook and WhatsApp.

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